Bruhat Bangalore Mahanagara Palike
Executive Engineer Yelahanka Project Division

Work: Construction and Formation of Connecting road from Neha Prakash Hospital to Ananthapura main road in Ward no-03 of Yelahanka Satellite town sub division

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
200-9. **Clearing and grubbing road land** including uprooting rank vegetation, grass, brush, saplings and trees of girth upto 300mm, by manual means, in area of thorney jungle, removal stumps, disposal of unserviceable materials, stacking of serviceable materials labour charges complete as per specifications. MORTH / Chapter 2 (P.No-138, I No-18.12)								
Basic rate	15.00							
6% Area weightage	0.90							
Total	15.90							
clearance	1	620.00	18.00		11160.00			
					11160.00	**Sqm**	**15.90**	**177444.00**
200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and cutting wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. **iii) Dismantling** Masonry. A. Rubble Stone masonry in lime mortar. MORTH Specification No. 202. (P.No. 139, No. 202.25).								
Basic rate	289.00							
6% Area weightage	17.34							
Total	306.34							
ground wall	1	500.00	0.45	0.60	135.00			
	1	500.00	0.60	0.60	180.00			
SW Wall	2	21.00	0.45	2.70	51.03			
					366.03	**Cum**	**306.34**	**112130.00**
dismantling **burnt brick masonry** in clay mortar/lime mortar/cement mortar and stacking the bricks within a radius of 50m and removing the debris to a distance upto 200m. (P.No. 270, I.No. 37.47).								
Basic rate	247.00							
6% Area weightage	14.82							
Total	261.82							
ground wall	1	500.00	0.20	1.80	180.00			
					180.00	**Cum**	**261.82**	**47,128.00**
300-1. **Earthwork excavation by manual means** in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 1.5 m, excavated surface leveled and sides roughly dressed, the disposed earth to be leveled neatly after breaking of clods complete asper specifications.MORTH / Chapter 3(I No-19.1, P No-143)								
Basic rate	130.00							
6% Area weightage	7.80							
Sub Total	137.80							
Lead with loading and unloading	72.36							
Total	**210.16**							

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
	2	620.00	1.20	1.20	1785.60			
	1	20.00	1.80	1.20	43.20			
Culvert	3	16.00	2.00	1.80	172.80			
Culvert	1	21.00	4.60	0.60	57.96			
Wall	1	140.00	3.25	1.50	682.50			
					2742.06	**Cum**	**210.16**	**576271.00**
	Providing and Filling in foundation with granite / trap broken metal 100mm. and down with approved sand including hand packing, ramming, watering, including cost of all materials with all lead and lift. complete as per specifications. (P.No-222,I No-2.15)							
Basic rate	2429.00							
6% Area weightage	145.74							
Total	2574.74							
Culvert	1	21.00	4.60	0.30	28.98			
Wall	1	140.00	3.25	0.30	136.50			
					165.48	**Cum**	**2574.74**	**426068.00**
	2000-10. Providing and laying **Plain cement concrete of mix 1:3:6** with OPC @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates cum, in foundation mechanically mixed, placed in foundation and compacted by vibration curing for 14 days including cost of all materials, labour, HOM curing, form works, and centering complete as per specifications. (P.No-222,I No-27.18)							
Basic rate	5115.00							
4.4*55.47	244.07							
Sub total	5359.07							
6% Area weightage	321.54							
Total	5680.61							
	2	620.00	1.20	0.15	223.20			
	1	20.00	1.80	0.20	7.20			
Culvert	3	16.00	2.00	0.20	19.20			
Ramp	1	5.00	20.00	0.20	20.00			
Culvert	1	21.00	4.60	0.20	19.32			
Wall	1	140.00	3.25	0.20	91.00			
					379.92	**Cum**	**5680.61**	**2158178.00**
	and laying plain/reinforced cement concrete for side drains using **M20 nominal mix with OPC at 300 kgs.** with 20mm and down size granite metal coarse aggregates at 0.69 cum aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM as per specificationsdo- Wall & bottom thickness 15cm (I No-37.59.2,P No-271)							
Basic rate	6670.00							
6*55.47	332.82							
Sub total	7002.82							
6% Area weightage	420.17							
Total	7422.99							
	2	620.00	0.90	0.15	167.40			
	4	620.00	0.15	0.90	334.80			

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
Raft	1	20.00	1.50	0.25	7.50			
Raft	2	20.00	0.23	0.60	5.52			
Culvert Raft	3	16.00	1.60	0.30	23.04			
Culvert Wall	6	16.00	0.30	1.00	28.80			
Culvert Slab	3	16.00	1.60	0.30	23.04			
					590.10	**Cum**	**7422.99**	**4380306.00**

: Providing and laying in position reinforced cement concrete of **Design Mix M25 with OPC** with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine @ 0.47cum, with super plasticisers @ 3 liters confirming to IS 9103-1999 reafirmed-2008 at mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in for footings, pedastals, retaining walls, return walls, walls (any thickness) including pilasters, columns pillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as ecifications. (I No-4.10,P No-14)

Basic rate	5812.00							
6.8*55.47	377.20							
Sub total	6189.20							
6% Area weightage	371.35							
Total	6560.55							
Culvert Raft	1	21.00	4.30	0.40	36.12			
	2	21.00	0.35	3.00	44.10			
	1	21.00	3.70	0.35	27.20			
Wall base	1	140.00	2.65	0.30	111.30			
	1	140.00	0.50	0.30	21.00			
	0.5	140.00	0.90	0.30	18.90			
	0.5	140.00	1.25	0.30	26.25			
			Avg-0.5+0.3					
Wall	1	140.00	0.40	2.00	112.00			
	1	140.00	0.30	2.10	88.20			
					485.07	**Cum**	**6560.55**	**3182292.00**

: **Providing and removing centering, shuttering,** strutting, propping etc., and removal of for vertical surface such as walls at any thickness, including attached pilasters, buttresses, and string courses cost of all materials, labour complete as ecifications. (I No-4.31,P No-16)

Basic rate	358.00							
6% Area weightage	21.48							
Total	379.48							
Culvert Raft	2	21.00		0.40	16.80			
	4	21.00		3.00	252.00			
	1	21.00	3.00		63.00			
Wall base	2	140.00		0.30	84.00			
	2	2.65		0.30	1.59			
Wall	2	140.00		4.10	1148.00			
					1565.39	**Sqm**	**379.48**	**594034.00**

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
W2200-8. **Providing weep holes** in Brick masonry / Plain / Reinforced concrete abutment, wing / return wall with 100 mm dia AC pipe, extending through the full width of the structure with ... of IV :20H towards drawing force. Complete as per drawing and Technical Specifications ... cost of materials, labour, HOM complete as per specifications. MORTH Specification ... & 2200 (I No-28.10,P No-229)								
Basic rate	147.00							
6% Area weightage	8.82							
Total	155.82							
	70				70.00			
Culvert Raft								
1.5 (3*21*2)/1.5=84 Nos	84				84.00			
Wall								
1.5 (340*4.1)/1.5=382	382				382.00			
					536.00	**Nos**	**155.82**	**83,520.00**
W2200-9. Providing and laying of **Filter media** with granular materials /stone crushed ... satisfying the requirements laid down in clause 2504.2.2. of MORTH specifications to a ... of not less than 600 mm with smaller size towards the soil and bigger size towards the wall ... provided over the entire surface behind abutment, wing wall and return wall to the full height ... to a firm condition complete as per drawing and Technical Specification including cost of ... labour, HOM complete as per specifications. (I No-28.13,P No-229)								
Basic rate	2091.00							
6% Area weightage	125.46							
Total	2216.46							
Culvert **Wall**	2	21.00	0.30	3.00	37.80			
					37.80	**Cum**	**2216.46**	**83,782.00**
W2200-6. **Providing T.M.T. steel reinforcement for R.C.C. work** including straightening, ... bending, hooking, placing in position, lapping and/or welding wherever required, tying with ... wire and anchoring to the adjoining members wherever necessary complete as per disign ... hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as ... specification. MORTH Specification No.1600 & 2200(I No-28.8.2,P No-229) issue rate 02-01-2021								
Basic rate	75610.00							
6% Area weightage	4536.60							
Total	80146.60							
... 65 kgs/cum		502.20	65.00		32.64			
... 110 kgs/cum		87.90	100.00		8.79			
Culvert 125 kgs/cum		485.07	125.00		60.63			
					102.07	**Tn**	**80146.60**	**8180253.00**
... and fixing **RCC Precast cover slab of 100mm thick** for drain in cement concrete M20 using ... granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, ... and concrete finished surfaces on both sides etc, complete and as per drawing and the								
Data rate	2337.00							

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
Drain	2	620.00	0.90		1116.00			
					1116.00	**Sqm**	**2337.00**	**2608092.00**

providing and fixing **RCC Precast cover slab of 250mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)

Data rate	5418.00							
Covers	1	20.00	1.50		30.00			
					30.00	**Sqm**	**5418.00**	**162540.00**

KSRRB M300-14. **Excavation for roadwork** in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1km and complete as per specifications. MORTH Specification No.301 (P.No-143, I No-19.14)

Basic rate	41.00							
6% Area weightage	2.46							
Sub TotalTotal	43.46							
6km Lead	15.36							
Total	**58.82**							
Roadformation	1.00	480.00	16.00	0.50	3840.00			
	1.00	140.00	17.00	0.50	1190.00			
retaining wall	1.00	60.00	2.00	2.00	240.00			
	1.00	70.00	3.00	2.00	420.00			
Culverts	1.00	200.00	20.00	1.50	6000.00			
	1.00	100.00	15.00	0.90	1350.00			
	1.00	75.00	6.00	0.40	180.00			
	1.00	130.00	12.00	0.40	624.00			
	1.00	180.00	10.00	0.45	810.00			
	1.00	70.00	7.00	0.35	171.50			
	1.00	85.00	1.60	0.40	54.40			
Deduct soil for median					-111.60			
					14768.30	**Cum**	**58.82**	**868671.00**

KSRRB M300-53 **Construction of Embankment** with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305 (P.No-147,I 19.60)

Basic rate	325.00							
6% Area weightage	19.50							
Total	344.50							
Taper volume sheet					16520.00			
					16520.00	**Cum**	**344.50**	**5691140.00**

KSRRB 300-58. **Compaction of original ground** with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3 (P.No-147, I No-19.64)

Basic rate	6.00							

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
6% Area weightage	0.36							
Total	6.36							
formation	1.00	620.00	16.00		9920.00			
					9920.00	**Sqm**	**6.36**	**63,091.00**

Construction of **granular sub-base Grading-V** as Sub-base and drainage layer by providing coarse crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision.(I No-20.5,P No-153)

Basic rate	1882.00							
6% Area weightage	112.92							
Total	1994.92							
formation	1.00	620.00	16.00	0.180	1785.60			
mouth	1.00	6.00	24.00	0.180	25.92			
					1811.52	**Cum**	**1994.92**	**3613837.00**

MORTH 400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)

Basic rate	1888.00							
6% Area weightage	113.28							
Total	2001.28							
formation	1.00	620.00	16.00	0.250	2480.00			
mouth	1.00	6.00	24.00	0.250	36.00			
Ramp	1.00	5.00	20.00	0.300	30.00			
					2546.00	**Cum**	**2001.28**	**5095259.00**

MORTH 500-6. Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.[illegible] kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6) issue rate Dated 01-01-2021

Basic rate	32.00							
6% Area weightage	1.92							
Total	33.92							
WBM								
formation	2.00	620.00	7.20		8928.00			
mouth	1.00	6.00	24.00		144.00			
					9072.00	**Sqm**	**33.92**	**307722.00**

MORTH 500-17. Providing and laying **dense graded bituminous macadam** using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to paver site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm [illegible]mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6) issue rate Dated 01-01-2021

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
Basic rate	6880.00							
6% Area weightage	412.80							
Total	7292.80							
Widening formation	2.00	620.00	7.20	0.050	446.40			
Side mouth	1.00	6.00	24.00	0.050	7.20			
					453.60	**Cum**	**7292.80**	**3308014.00**

500-7. Providing and applying **tack coat** using 80/100 grade bitumen(VG10) on the prepared topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-151,I No-21.7) issue rate Dated 01-01-2021

Basic rate	12.00							
6% Area weightage	0.72							
Total	12.72							
Widening formation	2.00	620.00	7.20		8928.00			
Side mouth	1.00	6.00	24.00		144.00			
					9072.00	**sqm**	**12.72**	**115396.00**

and laying **bituminous concrete 40mm thick** with hot mix plant, using crushed aggregates specified grading, premixed with bituminous binder and filler, transporting the hot mix to work laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheel, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using – do – using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic) (P.No.171, I.No.21.78.12) issue rate Dated 01-01-2021

Basic rate	8061.00							
6% Area weightage	483.66							
Total	8544.66							
Widening formation	2.00	620.00	7.20	0.040	357.12			
Side mouth	1.00	6.00	24.00	0.040	5.76			
					362.88	**Cum**	**8544.66**	**3100686.00**

Constructing **un-reinforced, plain cement concrete for pavements using Grade concrete M30** over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints,including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to -do- with OPC at 360 kg/cum and coarse aggregate 0.69cum, fine aggregate 0.46cum. (P.No-176,I No-22.6.1)

Basic rate	4916.00							
7.2*55.47	399.38							

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
Sub total	5315.38							
6% Area weightage	318.92							
Total	5634.31							
Ramp	1	5.00	20.00	0.200	20.00			
road formation	2	620.00	0.30	0.200	74.40			
					94.40	**Cum**	**5634.31**	**531879.00**

4-1.6 ; Providing and laying in position **plain cement concrete of Mix 1:2:4** with OPC @ 240kgs, 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregtes @ cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in ation, plinth and cills, including cost of all materials, labour, HOM curing complete as per fications. Specification No. KBS 4.1, 4.2.(P.No-13,I No-4.6,KPWD SR 2018-19)

Basic rate	5422.00							
4.8*55.47	266.26							
Sub total	5688.26							
6% Area weightage	341.30							
Total	6029.55							
Kerb	4.00	620.00	0.20	0.100	49.60			
road approaches	2.00	35.00	0.20	0.100	1.40			
					51.00	**Cum**	**6029.55**	**307507.00**

2.3 : **Filling available excavated earth** (excluding rock) in sides of foundations upto plinth in not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering ad upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. fication. No. KBS 2.9 (P.No-7, I No-2.10)

Basic rate	201.00							
6% Area weightage	12.06							
Total	213.06							
median	1.00	620.00	0.60	0.300	111.60			
					111.60	**Cum**	**213.06**	**23,777.00**

ding and fixing pre cast solid cement concrete **kerb stones** made out of CC 1:2:4 with top and om width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 ering and finishing cutting including formwork, curing, including cost of materials, labour charges machinery, loading and unloading, lead and lift, transportation ete.,complete (P.No-27,I No-5.30)

Basic rate	408.00							
6% Area weightage	24.48							
Total	432.48							
road formation	4.00	620.00			2480.00			
road approaches	2.00	35.00			70.00			
					2550.00	A		
length/length of Kerb					5666.67	B		
					5667.00	**Nos**	**432.48**	**2450864.0**

800-1. **Painting two coats** after filling the surface with synthetic enamel paint in approved on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8(P.No-180,I No-24.1)

Basic rate	80.00							
6% Area weightage	4.80							

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
Total	84.80							
Road formation	4.00	620.00		0.40	992.00			
road approaches	2.00	35.00		0.40	28.00			
					1020.00	**Sqm**	**84.80**	**86,496.00**

M800-13.**Road Marking with Hot Applied Thermoplastic Compound** with Reflectrising Glass on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic ound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface be level, uniform and free from streaks and holes complete as per specifications. MORTH ification No. 803(P.No-182,I No-24.15)

Basic rate	429.00							
6% Area weightage	25.74							
Total	454.74							
	2.5	620.00	0.15		232.50			
	2.5	620.00	0.15		232.50			
estrian markings	30.0	1.80	0.30		16.20			
					481.20	**Sqm**	**454.74**	**218821.00**

M800 **Road markers / Road stud** KSRRB M800-35. Providing and fixing of road stud 100x 100 diecast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, ed in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded in itable bituminous grout or epoxy mortar, all as per BS: 873 part 4:1973 complete as per ifications.(P.No-187,I No-24.41)

Basic rate	337.00							
6% Area weightage	20.22							
Total	357.22							
	6.0	620.00			3720.00			
m interval					620.00			
					620.00	**Nos**	**357.22**	**221476.00**

and fixing of Retro Reflective **Single Arrow Road Name Signboard** of size 1600mm x 900mm out of retro reflective sheeting conforming to Type XI standards of ASTM D 4956 - 09 & as per 2012 for full back ground of blue colour & white letters and fixed over 4 mm thick Aluminium Material sheet having minimum 0.5 mm thick Aluminium skin on both sides with back side grey colour and fixed over back support frame SS angle of 15mm x 20mmx 1.2mm, supported mm OD stainless steel pipe all round in 304 grade and 2 nos of vertical posts of 50 mm OD steel pipe of 202 grade firmly fixed to the ground by means of properly designed foundation 450mm x 450mm x 600mm in 1:1.5:3 ratio cement concrete. The background shall be blue in with letters and border in white, the item includes earthwork excavation, cost of all materials, unloading, lead, lift, transportation etc., complete. as per direction of engineer incharge of clause 6.9 of IRC 67-2012 for Type XI retro reflective sheeting from the sheeting manufacturer & ified copy of test reports from an independent test laboratory conforming to clause 6.7 of IRC 67- including outdoor weather exposure report for the retro reflective sheeting offered shall be itted by the contractor for technical qualification in the tender.(P.No-190, I No-24.59 of PWD 8-19)

Basic rate	13297.00							
6% Area weightage	797.82							
Total	14094.82							
	2	1.60	0.90		2.88	Sqm	14094.82	40,593.00

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
MB M800-2. **Retro-Reflectorised Traffic Signs** - Manufacturing, supply and installation of retro-reflectorised cautionary, mandatory and informatory signboards made out of cube corner micro prismatic grade sheeting confirming to 900 MM octagon stop board type XI standards of IRC :67:2012 specifications & fixed over 4 mm thick aluminium composite panel sheet having minimun 0.30 thick aluminium skin on both sides & fixed over a support frame of 25x25x3 mm MS angle and mounted on 75mm dia OR 75x75x6mm Mild steel angle of total height 2.70m with clear height of not less than 2.25m from the ground level to the bottom of the sign board & 60 cm below ground level. The sign post should be painted with one coat of red oxide paint and white colour with brands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of size 45 cm x 45 cm x 60 cm including cost & conveyance of all materials, equipment, machinery & labour charges, all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by the engineer in charge. 10 years warranty for retro reflective sheeting from the original sheeting manufacturer as per clause 6.9 in IRC 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier.-900 MM octagon stop board type XI (P.No.180, I.No.24.2.6 of PW,P&IWTD SR 2018-19)								
Basic rate	5047.00							
6% Area weightage	302.82							
Total	5349.82							
	4				4.00	Nos	5349.82	21,399.00
Retro-Reflectorised Traffic Signs								
providing and fixing of retro - reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of high intensity grade sheeting vide Clause 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing. (Standard data Book data) 900 MM Equilateral triangle - MB M800-2 (P.No-180, I No-24.2.1 of PWD BCSR 2018-19)								
Basic rate	3454.00							
6% Area weightage	207.24							
Total	3661.24							
	2				2.00	Nos	3661.24	7,322.00
Street light Electrification								
Manufacturing, supplying and erection of ...Mtrs long hot dip Galvanized Octagonal pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, providing suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec for .....Mtrs pole in single section and single joint welded as per IS 9595/IS 817/AWS having dimensions bottom .....mm, top....mm with 3mm thick, suitable base plate and holes of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 7 meters - Top 70mm and bottom 130mm dia P.13/I.4.2.5								
Basic rate	10930.00							
	25				25.00	Nos	10930.00	273250.00
Double Arm Bracket with 1500mm Standard 40/50MM dia P.16/I.4.7.5								
Basic rate	3115.00							
	25				25.00	Nos	3115.00	77,875.00

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. MCPCB.LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should in-house facility accredited by NABL/CPRI & any Government certified agency & Design Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED SourceLED Streetlight 120 I.5.42.5/I.5.42.6/I.12.8.5								
Basic rate	9200.00							
	50				50.00	Nos	9200.00	460000.00
supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, weather proof with provision for better heat dissipation, provided with hinged front cover, with tamper proof locking arrangements, with suitable size clamps with necessary entry pipe with gland and box should be finished with 7tanks treatment with powder paint and finally finished with approved colour etc., complete.16SWG P.30/I.5.42.2								
Basic rate	0.35							
	1	2000.00	30.00		60000.00	Sqcms	0.35	21,000.00
and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with washers etc., and painted with 2 coats of red oxide and then two coats of approved 40x40x6mm P.30/I.5.41.1								
Basic rate	255.00							
	16				16.00	Nos	255.00	4,080.00
and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using screws, bolts, nuts, necessary phase separators, handle and wiring complete. Protection of and Short circuit with thermal Magnetic/Micro processor release and Earth Fault as per IS- (Icu = Ics)FOUR POLE 100Amps 25kA. P.26/I.5.14.7								
Basic rate	6400.00							
	1				1.00	Nos	6400.00	6,400.00
and fixing miniature circuit breakers on existing MCB distribution boards using necessary materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking of 10K and complete wiring as required confirming to IEC 60898. 40 Amps DP I.5.17.5								
Basic rate	1336.00							
	2				2.00	Nos	1336.00	2,672.00
and Fixing of. mm dia class A GI pipe bracket up to 2 Mtrs long bent at suitable angle to this bracket 1x40/2x40 watts fluorescent tube street light fitting of all capacities to GI or or RCC pole / wall using suitable clamps, bolts, and nuts and wiring using suitable wires.Using 32mm dia G.I.Pipe P.79/I.14.1								
Basic rate	835.00							
	1				1.00	Nos	835.00	835.00

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
Laying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average soil resistivity 14 Ohms/Kms (Max) as per IS-3975 4 core 16 sqmm P.40/I.6.4.4								
Basic rate	150.00							
	1	900.00			900.00	m	150.00	135000.00
Laying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average soil resistivity 14 Ohms/Kms (Max) as per IS-3975 3.5 core 35 sqmm P.40/I.6.4.6								
Basic rate	225.00							
	1	150.00			150.00	m	225.00	33,750.00
Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / overhead on pole as required.In existing trench/duct.6 sqmm to 16 sqmm P.41/I.6.5.1								
Basic rate	11.88							
	1	900.00			900.00	m	11.88	10,692.00
Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / overhead on pole as required.In existing trench/duct. 25 sqmm to 75 sqmm P.41/I.6.5.2								
Basic rate	15.50							
	1	150.00			150.00	m	15.50	2,325.00
Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7)In soil (ordinary) P.41/I.6.6.1								
Basic rate	76.00							
	1	750.00			750.00	m	76.00	57,000.00
Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring as specified IS-694:confirming to latest amendments.1.5 sqmm P.5/I.2.3.2								
Basic rate	20.50							
	1	750.00			750.00	m	20.50	15,375.00
Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring as specified IS-694:confirming to latest amendments.10 sqmm P.6/I.2.3.6								
Basic rate	115.00							
	1	25.00			25.00	m	115.00	2,875.00
Providing Rcc Pole pedstal of Size 0.5x0.5x1.6 Mtrs Including digging of pit, tor steel, anchoring bolts and templates ,Centring,1;4;8base concrete,1;2;4pedestal concrete and etc coplete as per the data enclosed 18 pwd sr 14-15								
Data rate	4199.00							
	25				25.00	Nos	4199.00	104975.00
Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in earth pit. The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe upto complete depth. The connection from the pipe to the conduit etc., is to be established through funnel of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 12 mm dia P.40/I.6.1								
Basic rate	2999.70							
	1				1.00	Nos	2999.70	3,000.00

Description of Items	No	Length	Width	Depth	Quantity	Unit	Rate	Amount
ristor based single/ Three phase smart street light control and monitoring system Remotely ntrol and and monitorable smart street light system by using web or mobile application .smart ntrol system has hardware ruggedness over field issues like line cross, line short, lighting and any her irregularities in voltage. It has some features like 1.Remote lighting management.2.Precise hting turnoff.3.Load ballancing.4.Load power regulation.5.Status tracking. It works on the basis of me of these features 1) Main Control Unit (Mother board) : Handles controlling , data handling and her communication process. 2) Communication unit: GSM/GPRS quad bandwith RS232 interface reless communication unit 3) Gate Driver Unit: Firing angle controllable board for driving the ristor 4) Switching Thyristor: SCR 110 AMPS dual thyristor modules for switching 5) Embedded mware: Firmware to control , handle , process the data and communicate it wirelessly.6) Metal closure : IP66 weather prof metal enclosure.7) Transformers: Customized step down transformers various purposes.8) Wiring and other device assembly components.Three Phase AR								
Data rate	51500.00							
	1				1.00	Nos	51500.00	51,500.00
plying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary umen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc. 5qmm P.42/I.6.10.4								
Basic rate	350.00							
	1				1.00	Nos	350.00	350.00
							Total Construction Cost	50108942.00
							12% GST	5994296.04
							5% Tender Premium	2805161.90
							Sub Total	58908399.94
							Project report and Project Mangament Consultancy Charges	1090000.00
							Electrification Charges, Miscellaneous and Rounding off	1,600.06
							GRAND TOTAL	60000000.00

rtificate

The workspot was inspected and works is found to be necessary.

The area comes within the Bruhat Bangalore Mahanagara Palike limits.

The rates adopted based on the PWD SR,Bangalore circle for year 2018-2019, Data Rates and issue es Dated 01-01-2021

Assistant Engineer,
Yelahanka Project Division,
BBMP Bangalore

Asst. Exec. Engineer,
Yelahanka Project Division,
BBMP Bangalore

Executive Engineer,
Yelahanka Project Division,
BBMP Bangalore

Administrative Approval
Accorded For Rs 600 Lakhs
Head of A/C P3075
CER NO 12 Dt: 31/03/2022
E.E. (Project)

Technical Sanction
Accorded For Rs 600 Lakhs
Head of A/C P3075
CER NO 08 Dt: 19/05/21